

M.A. / I

A

PSYCHOLOGY— Course PS-3

(Research Methodology I)

(Admissions of 2008 and before)

Time : 3 hours

Maximum Marks : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

All Sections are compulsory.

Section A

All questions are compulsory.

Each question carries 10 marks.

1. Extract any two factors from the given correlational matrix and determine the percentage of variance explained by each factor.

	V1	V2	V3	V4	V5
V1	1.0	0.45	0.65	0.23	0.54
V2		1.0	0.39	0.27	0.51
V3			1.0	0.52	0.18
V4				1.0	0.30
V5					1.0

OR

What is factor analysis? Why it is needed for psychological research? Also explain commonality, specificity and uniqueness.

2. What is repeated measure factorial design? How this is different than the factorial experiment. Give example.

OR

Partition the sum of squares and degree of freedom for the 3x4x2 repeated measure design with n=5.

3. Discuss the various steps involved in construction of an psychological scale..

OR

Discuss item difficulty, item discrimination, item reliability and item validity.

4.(a) Differentiate between Latin Square and Greco-Latin Square designs.

(b) Describe the assumptions underlying ANCOVA.

OR

Discuss the application of multiple comparison of means. Illustrate any one method with suitable example.

5. Calculate the sum of square of AxC for 3x4x4 factorial design with n=5 subjects from the data given below

	C1	C2	C3	C4
A1	45	50	55	45
A2	45	60	55	65
A3	30	40	45	55

OR

Interpret graphically $SS_{ab}=0.0$ and $SS_{abc}\neq 0.0$

Section B

All questions are compulsory.

Each question carries 5 marks

6. Discuss the application of psychometric criterion of parallel test in psychological research.

OR

What are the ethical considerations of psychological measurement.

7, what is IRT and how to apply in test construction?

OR

Describe the Rasch one-parameter model.

8. What is the relationship of reliability and validity.

OR

A test having a reliability of 0.60 with 50 items. If 50 more items are added, then what will be the new reliability.

9. Discuss the nested designs.

OR

What are the assumptions underlying ANOVA.

10. Write short notes on any one of the following.

a) Stochastic model.

b) Profile analysis